US 20190106055A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2019/0106055 A1**

Yoon (43) **Pub. Date: Apr. 11, 2019**

(54) **ADVANCED SUNROOF LIGHTING SYSTEM**

(71) Applicant: **Tesla, Inc.**, Palo Alto, CA (US)

(72) Inventor: **Joongmin Yoon**, Mountain View, CA (US)

(73) Assignee: **Tesla, Inc.**, Palo Alto, CA (US)

(21) Appl. No.: **15/726,647**

(22) Filed: **Oct. 6, 2017**

Publication Classification

(51) **Int. Cl.**

B60Q 3/85	(2006.01)
H05B 33/08	(2006.01)
B60Q 3/74	(2006.01)
B60Q 3/208	(2006.01)
F21V 14/00	(2006.01)

(52) **U.S. Cl.**

CPC ***B60Q 3/85*** (2017.02); ***H05B 33/0845*** (2013.01); ***H05B 33/0863*** (2013.01); *F21Y 2115/10* (2016.08); ***B60Q 3/208*** (2017.02); ***F21V 14/003*** (2013.01); ***B60Q 3/74*** (2017.02)

(57) **ABSTRACT**

An advanced sunroof lighting system includes a sunroof having a first transparent layer and a second transparent layer substantially parallel to the first transparent layer. The sunroof also comprises a tint layer disposed between the first transparent layer and the second transparent layer. The tint layer is electrically controllable to allow a portion of light incident on the tint layer to pass through the tint layer. The sunroof further comprises a transparent lighting layer disposed between the tint layer and the second transparent layer. The transparent lighting layer comprises a plurality of light sources that are electrically controllable to emit light. The transparent lighting layer further comprises a plurality of scattering centers configured to redirect light received from the plurality of light sources towards the vehicle's cabin.